Input Interface — 20

Purpose parameters — 22

Main Loop

Instances of Document classes / selection engine — 18

Hypertext links to new document — 28

Customized versions of document — 26

Setup

Documents class definitions — 16

Parser — 14

Master document datafile — 12

Data structure — 13

Authoring tool — 30

10

FIGURE 1

1/8

Block 1—The parameters:

```
PurposeParameters
  (<feature 1>=<list of possible values>)&
  (<feature 2=<list of possible values>)&
  [Subsequent lines define remaining features]

RepresentationLevelParameters
  (<list of representation levels to output>)
```

Block 2—Identification of the top-level object:

```
toplevel=Document.<name of main Document>
```

Block 3—Definitions of all Documents and their variations:

Sub-block: Definition of a Document and its variations.

Field: Definition of the Document.

```
Document <name of document>
|variations=<list of variations of the document>&
 annotations=<list of annotations>|
```

Field: Definitions of the Document's variations.

Subfield: Definition of a variation of the Document.

```
DocumentVariation <name of document variation>
|condition=<Boolean expression>&
 componentList=<list of components of the document variation>&
 annotations=<list of annotations>|
```

Subsequent subfields define remaining variations of the Document.

Subsequent sub-blocks define remaining Documents and their variations.

Block 4—Definitions of all Sections and their variations:

Sub-block: Definition of a Section and its variations.

Field: Definition of the Section.

```
Section <name of section>
|variations=<list of variations of the section>&
 annotations=<list of annotations>|
```

Field: Definitions of the Section's variations.

Subfield: Definition of a variation of the Section.

```
SectionVariation <name of section variation>
|condition=<Boolean expression>&
 componentList=<list of components of the section variation>&
 annotations=<list of annotations>|
```

Subsequent subfields define remaining variations of the Section.

Subsequent sub-blocks define remaining Sections and their variations.

FIGURE 2 (a)

2/8

Block 5—Definitions of all Topics and their variations:

    Sub-block: Definition of a Topic and its variations.

        Field: Definition of the Topic.

```
              Topic <name of topic>
              |variations=<list of variations of the topic>&
              annotations=<list of annotations>|
```

        Field: Definitions of the Topic's variations.

            Subfield: Definition of a variation of the Topic.

```
                  TopicVariation <name of topic variation>
                  |condition=<Boolean expression>&
                  componentList=<list of components of the topic variation>&
                  annotations=<list of annotations>|
```

            Subsequent subfields define remaining variations of the Topic.

    Subsequent sub-blocks define remaining Topics and their variations.

Block 6—Definitions of all Sentences and their variations:

    Sub-block: Definition of a Sentence and its variations.

        Field: Definition of the Sentence.

```
              Sentence <name of sentence>
              |variations=<list of variations of sentence>&
              annotations=<list of annotations>|
```

        Field: Definitions of the Sentence's variations.

            Subfield: Definition of a variation of the Sentence.

```
                  SentenceVariation <name of sentence variation>
                  |condition=<Boolean expression>&
                  componentList=<list of components>&
                  levelList=<list of representation levels>&
                  annotations=<list of annotations>|
```

            Subfield: Definitions of the Sentence's representations.

```
                  SentenceRepLevel <name>
                  |repLevel=<list of representation levels>&
                  componentList=<a string or list of components>&
                  annotations=<list of annotations>|
```

        Subsequent subfields define remaining variations of the Sentence and their representations.

    Subsequent sub-blocks define remaining Sentences and their variations.

FIGURE 2 (b)

3/8

**Block 7—Definitions of all Lexicals and their variations:**

Sub-block: Definition of a Lexical and its variations.

Field: Definition of the Lexical.

```
Lexical <name of lexical item>
|variations=<list of variations of lexical item>&
annotations=<list of annotations>|
```

Field: Definitions of the Lexical's variations.

Subfield: Definition of a variation of the Lexical.

```
LexicalVariation <name of lexical variation>
|condition=<Boolean expression>&
string=<character string>&
value=<DocumentClass>.<objectName>&
annotations=<list of annotations>|
```

Subsequent subfields define remaining variations of the Lexical.

Subsequent sub-blocks define remaining Lexicals and their variations.

**Block 8—Definitions of all Words:**

Field: Definition of a Word.

```
Word <word>
|value="<word>"|
```

Subsequent fields define remaining Words.
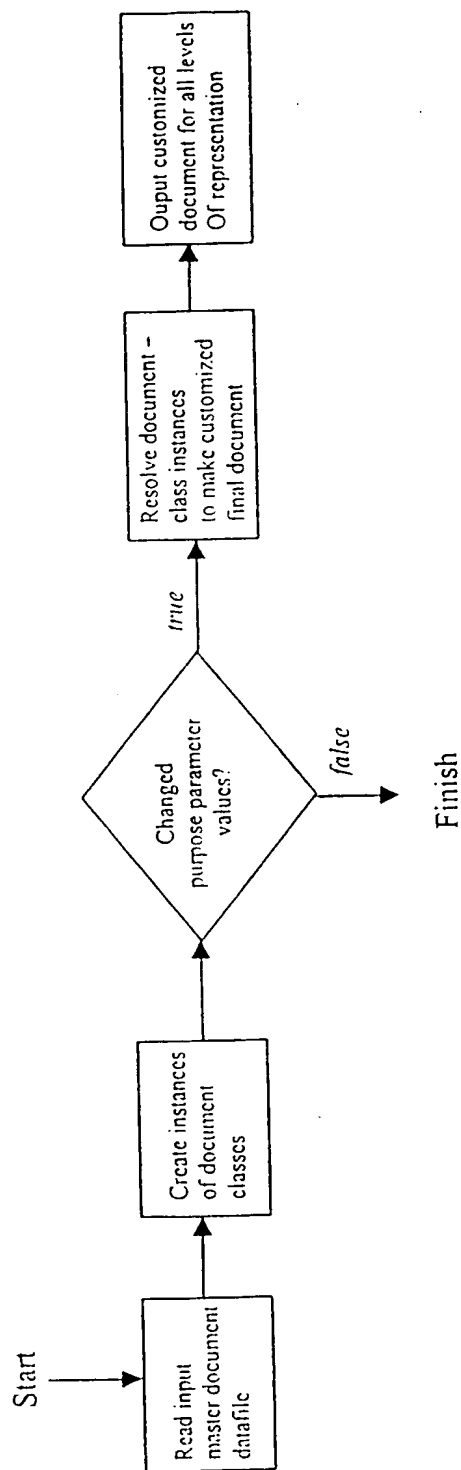
FIGURE 2(c)

4/8

```
Annotation <name of the Annotation object>
  |<property>="<value>"&
   <property>="<value>"&
   <Subsequent lines define remaining properties and their values>&
   parent=<name of the immediate ancestor of this Annotation object>|
```
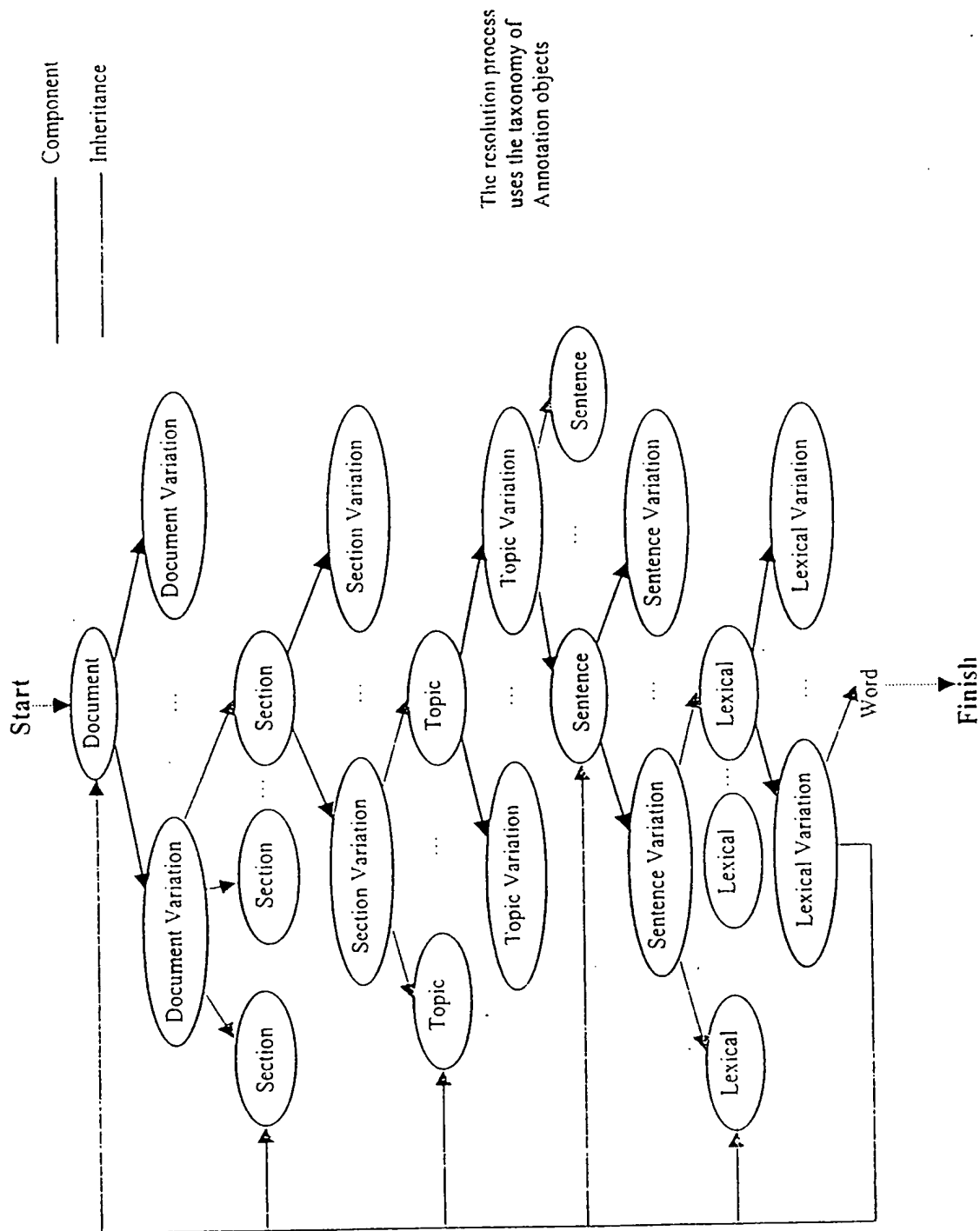
FIGURE 3(a)

5/8

```
External <name of the External object>
   |fileName="<file name>"&
    profile=<list of parameters describing current user/audience>|
```

FIGURE 3(b)

Start →

Read input
master document
datafile

→ Create instances
of document
classes

→ Changed
purpose parameter
values?

false → Finish

true ↑

Resolve document –
class instances
to make customized
final document

→ Ouput customized
document for all levels
Of representation

FIGURE 4

FIGURE 5